

**REMARKS/ARGUMENTS**

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-12 are pending in the application with Claims 5-12 added and Claims 1-4 amended by the present amendment.

In the outstanding Office Action, Claims 1-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Seta (U.S. Patent No. 6,483,825 B2) in view of Prior (sic).

Applicants acknowledge with appreciation the telephone interview between the Examiner and Applicants' representative on August 24, 2004. During the telephone interview, the Examiner acknowledged the Official Action improperly cited the secondary reference that is the basis of the rejection under 35 U.S.C. § 103(a), and that the secondary reference was Applicants' Admitted Prior Art as shown in Figure 5 of Applicants' originally filed specification.

Claims 1-4 are amended to more clearly describe and distinctly claim Applicants' inventions. Support for these amendments is found in Applicants' originally filed specification. Claims 5-8 are method claims that correspond to the system recited in Claims 1-4. Claims 9-12 are apparatus claims that correspond to the system recited in Claims 1-4. No new matter is added.

Briefly recapitulating, amended Claim 1 is directed to a radio communication system, comprising a maintenance terminal, and a first base station configured to adjust the phase of a frame signal according to a GPS signal when a predetermined re-synchronization time is reached. The first base station is also configured to transmit the frame signal. The radio communications system also includes a subordinate base station which, upon reception of the frame signal from the first base station, is configured to adjust the phase of an internal frame signal to coincide with the received phase of the frame signal. The first base station is further

configured to adjust an internal clock operating according to a line clock based on a time matching signal transmitted from the maintenance terminal. The time matching signal is transmitted before the adjustment of the phase of the frame signal according to the GPS signal is performed. Applicants' claimed invention allows for improved performance when clock signals diverge.<sup>1</sup>

Seta discloses a CDMA time synchronization method that includes synchronizing the time of a plurality of base stations based upon time reference information received by each base station.<sup>2</sup> The time reference information is periodically transmitted to the plurality of base stations by a base station controller.<sup>3</sup> The time reference information includes data to specify a reference time and time correction data.<sup>4</sup>

However, as noted in the Official Action, Seta does not disclose or suggest adjusting the phase of a frame of a signal as recited in Applicants' original Claim 1. The time reference and correction signals include no phase adjustment information.<sup>5</sup> Thus, contrary to the Official Action,<sup>6</sup> Seta does not disclose or suggest a first or subordinate base station configured to adjust the phase of an internal frame signal to coincide with a received phase of the frame signal. Thus, Seta also fails to disclose or suggest "adjust[ing] an internal clock operating according to a line clock based on a time matching signal transmitted from a maintenance terminal, said time matching signal being *transmitted before the adjustment of the phase* of the frame signal according to the GPS signal is performed."

Applicants' APA discloses a system and method of determining a phase of a frame signal based on an internal clock operating according to a line clock, where an absolute base station adjusts the phase of a frame based on a PPS signal received by a GPS receiver. A

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<sup>1</sup> Specification, page 1, line 35 – page 3, line 27.

<sup>2</sup> Seta, column 3, lines 43-45.

<sup>3</sup> Seta, column 3, lines 59-64.

<sup>4</sup> Seta, column 3, lines 61-63.

<sup>5</sup> Seta, Figure 5, column 9, line 60 – column 9, line 36.

<sup>6</sup> Official Action, page 2, paragraph # 2, lines 10-12.

subordinate base station adjusts the phase of an internal frame signal to coincide with the phase of a frame signal received from the absolute base station. However, like Seta, Applicants' APA does not disclose or suggest "adjust[ing] an internal clock operating according to a line clock based on a time matching signal transmitted from a maintenance terminal, said time matching signal being *transmitted before the adjustment of the phase* of the frame signal according to the GPS signal is performed."

Applicants' amended Claim 2 is directed to a radio communication system, comprising a first base station configured to adjust the phase of a frame signal according to a GPS signal when a predetermined re-synchronization time is reached. The first base station is also configured to transmit the frame signal. The radio communications system also includes a subordinate base station which, upon reception of the frame signal from the first base station, is configured to adjust the phase of an internal frame signal to coincide with the received phase of the frame signal. When it is detected that a call has been generated before the predetermined re-synchronization time is reached, the first base station is configured to hand over the call to the subordinate base station.

Seta discloses transmitting a signal after resynchronization.<sup>7</sup> However, contrary to the Official Action,<sup>8</sup> Seta does not disclose or suggest Applicants' claimed feature that "[w]hen it is detected that a call has been generated before the predetermined re-synchronization time is reached, the first base station is configured to hand over the call to the subordinate base station." Also, Seta does not disclose or suggest a first or subordinate base station configured to adjust the phase of an internal frame signal to coincide with a received phase of the frame signal. Applicants submit that Applicants' APA does not cure the deficiencies of Seta relative to Claim 2.

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<sup>7</sup> Seta, column 3, lines 23-30; column 11, lines 7-19.

<sup>8</sup> Official Action, page 3, lines 16-18.

As none of the cited prior art, individually or in combination, disclose or suggest all the elements of independent Claims 1 and 2, Applicants submit the inventions defined by Claims 1 and 2, and all claims depending therefrom, are not rendered obvious by the asserted prior art for at least the reasons stated above.<sup>9</sup>

Furthermore, Applicants submit there is no teaching, suggestion, or motivation, either explicitly or implicitly, in either reference to combine the synchronization techniques of Seta with the phase adjustment of Applicants' APA to arrive at Applicants' inventions recited in Claims 1 and 2. In particular, the fact that Seta makes no reference to phase adjustment, Applicants submit it is only through an impermissible hindsight reconstruction of Applicants' invention that the rejection of Claims 1 and 2 can be understood.<sup>10</sup>

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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<sup>9</sup> MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

<sup>10</sup> MPEP § 2143.01 "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge of one of ordinary skill in the art."